

In the Claims

Please replace all prior versions, and listings, of claims in the application with the following list of claims, in which insertions are indicated by underlining and deletions are indicated by strikeouts or double bracketing.

1.-17. (Canceled)

18. (Previously presented) A variable region of a heavy polypeptide chain of an immunoglobulin that specifically binds an antigen of interest, said variable region itself containing an antigen binding site, without contribution of a variable region of a light chain, which is absent.

19. (Currently amended) A fragment of at least 10 amino acids of a variable region of a heavy polypeptide chain of an immunoglobulin that specifically binds an antigen of interest, said variable region itself containing an antigen binding site, without contribution of a variable region of a light chain, which is absent.

20.-21. (Canceled)

22. (Previously presented) A polypeptide comprising a variable region of a heavy polypeptide chain according to claim 18 or a fragment according to claim 19, recombinantly fused to all or part of a constant region of a human antibody.

23. (Withdrawn) A variable region of a heavy polypeptide chain according to claim 18 which is combined with a fragment of a four-chain immunoglobulin.

24. (Withdrawn) A fragment of a variable region according to claim 19, which is combined with a fragment of a four-chain immunoglobulin.

25. (Previously presented) A variable region of a heavy polypeptide chain according to claim 18, which is expressed in a prokaryotic or in a eukaryotic host cell.

26. (Previously presented) A fragment of a variable region according to claim 19, which is expressed in a prokaryotic or in a eukaryotic host cell.

27. (Previously presented) A polypeptide according to claim 22, which is expressed in a prokaryotic or in a eukaryotic host cell.

28. (Withdrawn) A fragment of a variable region according to claim 19, which comprises at least 10 amino acid residues of the variable region of a heavy polypeptide chain and comprises the residue corresponding to position 45 in the immunoglobulin, said residue at position 45 being a charged amino acid residue or a cysteine residue.

29. (Withdrawn) A fragment of a variable region according to claim 28, which is combined with a fragment of a four-chain immunoglobulin.

30. (Withdrawn) A modified 4-chain immunoglobulin or a fragment thereof comprising a variable VH region which is modified such that the VH region has been partially replaced by specific sequences or amino acid residues of a fragment of a variable region according to claim 19.

31. (Previously presented) A variable region of a heavy polypeptide chain according to claim 18 or a fragment of a variable region according to claim 19, wherein the variable region or fragment is suitable for use in in vitro diagnosis.

32. (Previously presented) A variable region of a heavy polypeptide chain-according to claim 18 or a fragment of a variable region according to claim 19, wherein the variable region or fragment is suitable for use in in vivo diagnosis.

33. (Previously presented) A variable region of a heavy polypeptide chain according to claim 18 or a fragment of a variable region according to claim 19, which is labeled with a detectable label.

34. (Withdrawn) A variable region or fragment according to claim 33, wherein the detectable label is an imaging agent.

35. (Previously presented) A variable region or fragment according to claim 33, wherein the detectable label is selected from the group consisting of a radioisotope, a chemical marker, an enzymatic marker, or a chemiluminescent marker.

36. (Withdrawn) A variable region of a heavy polypeptide chain according to claim 18 or a fragment of a variable region according to claim 19, which is directed against an immunoglobulin idiotype.

37.-50. (Canceled)

51. (Currently amended) A composition comprising a variable region of a heavy polypeptide chain of an immunoglobulin that specifically binds to an antigen of interest, said variable region being devoid of normal light chain interaction sites.

52. (Currently amended) A composition comprising a fragment of at least 10 amino acids of a variable region of an immunoglobulin that specifically binds to an antigen of interest, said variable region being devoid of normal light chain interaction sites.

53. (Previously presented) The composition according to claim 51 or 52, wherein the variable region or the fragment specifically binds a protein, hapten, carbohydrate or nucleic acid.

54. (Previously presented) The composition according to claim 51 or 52, wherein the variable region or the fragment specifically binds a protein present on tumor cells.

55. (Withdrawn) The composition according to claim 51 or 52, wherein the variable region or the fragment is combined with a toxin, enzyme, drug, hormone, or cytokine.

56. (Withdrawn) The composition according to claim 54, wherein the toxin is mistletoe lectin toxin.

57.-58. (Canceled)

59. (Withdrawn) The composition according to claim 51 or 52, wherein the variable region or the fragment is capable of targeting drugs, hormones or cytokines to cells.

60.-63. (Canceled)

64. (Withdrawn) A method for synthesizing a polypeptide according to claim 22 comprising (a) selecting a variable region or a fragment having a determined antigen specificity; and (b) recombinantly fusing the variable region or the fragment of step (a) to a constant region.

65. (Withdrawn) A method according to claim 64, further comprising expressing the polypeptide as a fusion polypeptide.

66.-69. (Canceled)